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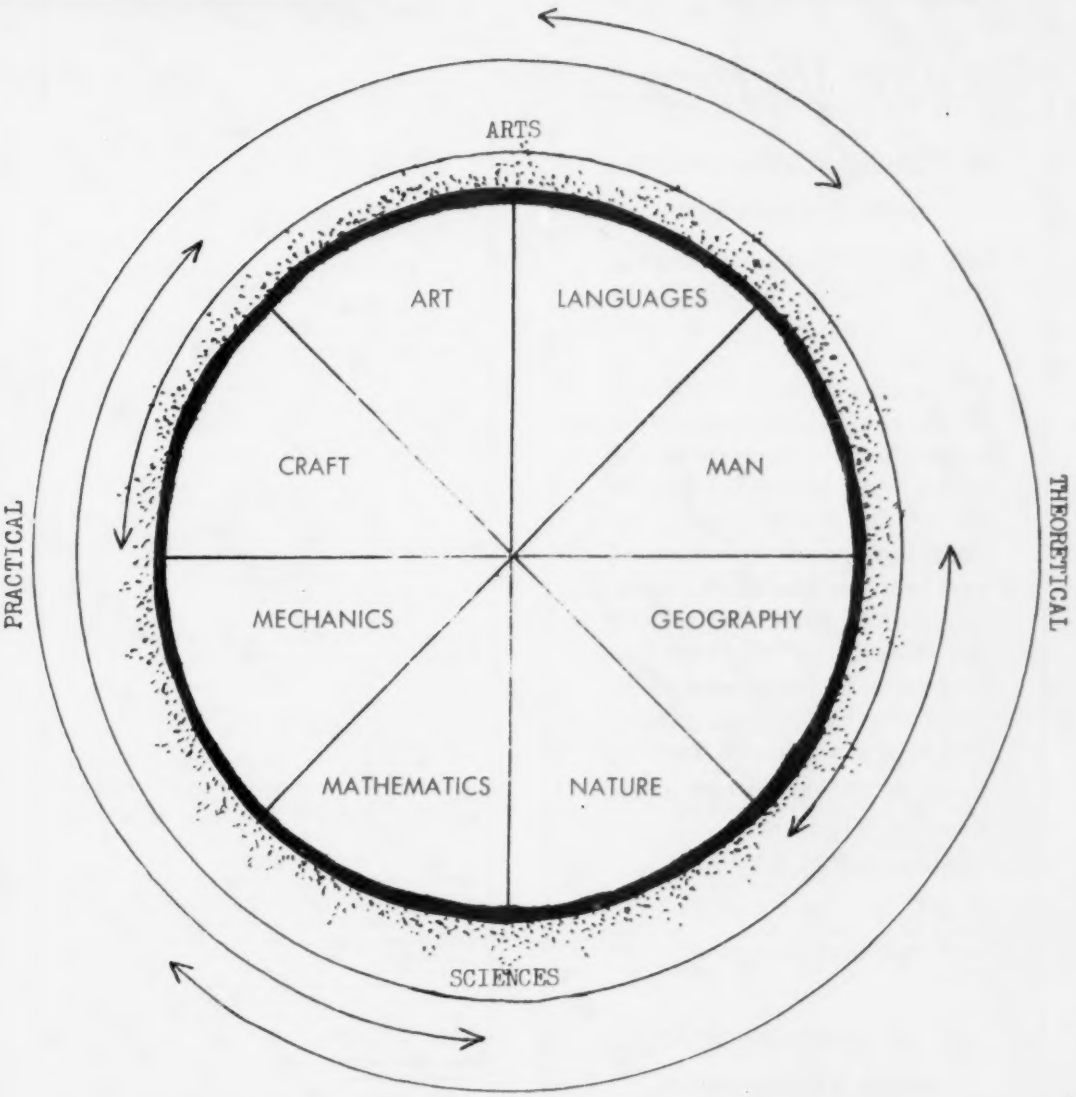

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SCHOOL AND SOCIETY

FEBRUARY 13, 1960

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Education's National Biweekly

Editorial

LIBERAL STUDIES AND THE PROFESSIONS

THE SIMULTANEOUS CONCLUSION of the Ford-financed "Higher Education for Business," by Robert A. Gordon and James E. Howell (Columbia University Press), and the Carnegie-supported "The Education of American Businessmen," by Frank C. Pierson (McGraw-Hill), that business education in the colleges should be founded on a solid core of liberal arts is to be applauded by all friends of genuine higher education. Likewise deserving of approval is the correlative conclusion that the specialized, practical business courses should be left to the proprietary schools, company training programs, and other institutions of non-university status. One might quarrel with the recommendation that such courses also be consigned to the junior college, but this might appear to some to be the lesser of two evils.

It is heartening to take note of the growing trend to stress liberal arts content in the preparation for various professional fields. In recent years reports have been made public urging more liberal arts courses at the expense of practical, *ad-hoc* courses in professional subjects. We might mention the fields of engineering (a pioneer in this respect), pharmacy, and nursing. There is evident a tendency to have premedical students major in areas other than biological science. Professional leaders, at long last, have realized that training is not at all equivalent to education and are consequently urging that a general education be made the basis of the professional program.

In the field of teacher preparation, too, there have been some stirrings. In far too many cases, however, the professional element is too prominent. Furthermore, in the professional studies proper the accent is altogether too frequently on the practical side than on the theoretical-liberal content. And what is true for the education of the teacher is all the more true for the preparation of the school administrator. The leaders of the professional education of the teacher and administrator should take a leaf out of the reports of the other professions and overhaul their curricula in favor of the liberal arts and the liberal-theoretical element in the professional studies.

The campus community is awakening to the recognition of the true nature of education. All of its branches should throw out the deadwood and lay proper emphasis on the essential studies. Higher education thus will become high and educational.

WILLIAM W. BRICKMAN

MORE STRESS ON GEOGRAPHY TEACHING

THE DEMAND for trained geographers in the teaching profession is at an all-time high, recently declared Charles M. Davis, chairman, department of geography, University of Michigan. "Until the ascendency of internationalism in U. S. foreign policy, the characteristics of foreign places were of little interest to the general public," he said. "World War II changed this. The postwar rivalry between the U. S. and the U. S. S. R. has generated a motivation for geography study in the schools. Geography enrollments in teacher training institutions are growing. Of 82 institutions in the U. S. with geography enrollments of over 900, 25 at least are primarily teacher training schools. Two of the six with largest enrollments are of this character.

"Since World War II, several textbook series have been published for the primary schools, reflecting the newer ideas in geography and a great improvement over the older books. Recently an excellent high school textbook has reached the market.

"In 1900 geography instruction was little more than the names of rivers, mountains, and cities and lists of products of various countries—a very dull subject. After the establishment of the Association of American Geographers in 1904, the subject developed by adding the 'human' or 'cultural' aspects and the techniques of land use mapping. Its economic and military applications were evident in the period from 1917 until the present.

"Rather small attention was given to geography as a part of education by the professional geographers. School books were out of date and teachers were trained by a course or two, not always given by the more prominent men in the field. It was not until the 1920's that there were more than a few departments of geography in this country.

"The significant change in educational techniques that is called the 'progressive movement' minimized rote learning and attempted to present information in such a way as to attract the interest of students and to relate it to their ordinary lives. Under this concept, history and geography, two rather dull subjects, were combined with two more glamorous ones, economics and sociology, and presented as a 'package deal' labeled 'social studies.' This was good in general but had some serious weaknesses from the point of view of geography. In practice, a social studies major studied mostly history. Geography as such almost disappeared from the curricula of secondary schools."

Prof. Davis referred to a report issued by the National Education Association urging the modernization of geography instruction and its restoration to this country's school system and said, "I certainly agree that geography should be renovated and made a more important part of the curriculum in primary and secondary schools. In my opinion, its present status in the public schools is advancing rapidly."

GEOGRAPHY FIELD WORK FOR ADVANCED STUDENTS

ESTABLISHMENT of a Big Ten-Chicago geography field laboratory for advanced students would offer important training advantages, according to Prof. Charles M. Davis, chairman, department of geography, University of Michigan. Big Ten universities and the University of Chicago have made preliminary plans to establish a cooperative summer field laboratory by 1961 which would focus the varied resources of member institutions upon improved field training.

The University of Michigan, which has offered professional field training for more than 40 years, is one of several Big Ten universities now conducting summer field laboratories. But individual programs face problems.

"Professional graduates are required to be competent in field methods," Prof. Davis points out, "but this instruction is very costly per student when only three to six students in a department earn Ph.D.'s in geography each year. No single field instructor is expert in all kinds of methodology, which ranges from urban techniques to airphoto analysis. And from a single location only a limited number of land types and human organizations is available for study."

A joint field laboratory would increase the size of the study group to about 50 and provide a more economical operation; use a wide range of faculty talent from several universities; make available two or more locations from which operations could be conducted and between which students could be exchanged; and permit institutions with small professional groups to offer first-class field instruction and to require this for their professional graduates.

(EVENTS continued on next page)

SUMMER INSTITUTES IN THE HUMANITIES

TWO SUMMER INSTITUTES IN THE HUMANITIES will be sponsored, July 1-30, by the John Hay Fellows Program: one at Bennington (Vt.) College; the other at Williams College (Williamstown, Mass.). Some 75 public high-school teachers and 25 public school administrators and school board or school committee members will participate. In seminars they will read and discuss several significant books; in small classes they will study literature, history, and philosophy. There will be special courses in music and art, and full use will be made of the Summer Theater and the Sterling and Francine Clark Art Institute in Williamstown and of the Berkshire Music Festival at nearby Tanglewood. The faculty will be drawn from Bennington, Oberlin, and Williams Colleges, and Columbia, Rutgers, and Wesleyan Universities.

The 75 teachers will be selected from academically sound high schools interested in making effective use of the time and talents of their teachers and in breaking educational lock steps. Applicants should have had at least five years of high-school teaching experience and should be not more than 50 years old. Each participant will receive $310 for the four-week period, plus $62.50 for each dependent to a maximum of four, and a travel allowance to a maximum of $100 for each participant. The charge for meals and a room in a dormitory for four will be $145 for each person.

Participants will come from the District of Columbia, Arizona, Colorado, Connecticut, Illinois, Louisiana, Maryland, Massachusetts, Michigan, Missouri, New York (outside metropolitan New York City), North Carolina, Ohio, Oregon, Pennsylvania (outside metropolitan Philadelphia), Utah, Virginia, and Washington. Correspondence should be addressed to Charles R. Keller, director, John Hay Fellows Program, 9 Rockefeller Plaza, New York 20, N. Y. Applications will close on March 1, 1960.

TV TEACHING IS DIGNIFIED ADVERTISING

TELEVISION EDUCATION is dignified advertising, not teaching, recently stated Robert Kirsner, associate professor of Romance languages and literatures, University of Cincinnati, who twice has presented a popular series, "Spanish for the Traveler," over a Cincinnati TV station.

"In this age of automation glorification, there is nothing more automatic than television for spreading happiness in education." According to Dr. Kirsner, the classroom teacher cannot compete with the well-being which television exudes. The TV student, encouraged by current school curriculum emphasis on the happiness of acceptance and belonging, comes to equate comfort with learning. Classroom teaching, on the other hand, is a process of give and take and demands active participation of audience as well as teacher.

"The classroom cycle is completed only when the student mounts the stage and performs, usually in the form of taking an examination," Dr. Kirsner said. "In all this there is often discomfort rather than comfort. Being happy or content is at best a by-product and more often than not a direct result of knowledge and understanding, which demands active effort. In the wedding of teaching and television—a marriage full of contradictory interests and purposes—all the teacher can do is hope to imbue the viewer with a desire for knowledge and respect for the subject matter. The partnership is honorable only when the teacher understands and makes it clear that he is not teaching but rather conducting dignified advertising."

MEASURING MODERN LANGUAGE APTITUDE

STUDENTS with special talent for mastering foreign languages can be discovered by the new Modern Language Aptitude Test devised by Profs. John B. Carroll, Harvard University, and Stanley M. Sapon, Ohio State University, for use in high schools, colleges, and foreign language schools. Every new Foreign Service officer in the U.S. State Department is tested this way now, and the Air Force has applied it in selecting men for concentrated study of such languages as Chinese, Russian, and Arabic.

Based on five years of research, the test was tried out on some 10,000 high-school and college students before its release for general use. It shows only a moderate degree of relationship with general intelligence and is a better predictor of foreign language success than are I.Q. tests.

Essentially the test is a series of practice exercises in learning various aspects of foreign languages. It has five parts, takes an hour, and is administered with a tape recording. A "short form" uses only the last three parts, takes only a half-hour, and does not require a tape recorder.

In the first part, the student learns words for the numbers 1, 2, 3, and 4, together with the 10's and 100's, in an artificial language. He then is tested for his ability to write these numbers from dictation. In the second part, he is tested on his ability to identify sounds and learn phonetic symbols for them. This ability is very important in foreign language learning and also seems to be related to the ability to mimic foreign language phrases with the correct accent. In the third part, the student's ability to decipher phonetically spelled English words is tested. The fourth part measures the student's "sensitivity to grammar." It asks him to identify certain aspects of the structure of English sentences. The fifth part measures the memory ability which seems to help in foreign language learning. The student learns a few words in an artificial language and then is tested for immediate memory of them.

The Modern Language Aptitude Test is published by The Psychological Corp., New York City.

DECLINE IN UNDERGRADUATE ENGINEERING ENROLLMENT

UNDERGRADUATE ENROLLMENT in the nation's 234 engineering colleges and universities declined 5.4% in the fall of 1959 in the face of an all time high in general college enrollment, U.S. Commissioner of Education Lawrence G. Derthick announced Dec. 22, 1959. He said that the number of full-time and part-time undergraduates in engineering schools was 243,000 compared with 257,000 in the fall of 1958. General college enrollment rose from 3,259,000 in the fall of 1958 to 3,402,000, an increase of over four per cent.

According to Commissioner Derthick, the most significant feature of the decline in undergraduate enrollment in the engineering schools is that freshmen enrollments declined for the second consecutive year. The total number of freshmen in engineering courses is 68,000, compared with 70,000 in the fall of 1958, a reduction of three per cent.

The 11% decline in 1958 in full-time freshmen engineering enrollments is largely reflected in a 10% drop in sophomore enrollments. The reduction in the number of full-time engineering sophomores is from about 53,000 to about 48,000.

Full-time junior enrollments in engineering classes declined seven per cent, from about 47,000 to less than 44,000, and senior full-time enrollments declined about two per cent, from over 48,000 to about 47,000.

The 36,000 part-time engineering students are included in the total undergraduate figure cited, but not in the figures for each undergraduate level. Part-time students are not ordinarily identifiable by class levels.

"The fact that graduate enrollments in engineering courses are now at an all time high is not as reassuring as it should be, because this only reflects increased undergraduate enrollments for several years prior to 1958," Commissioner Derthick said. "The 7.5 per cent increase in engineering graduate enrollments this fall is less than half of the 16.2 per cent jump in the fall of 1958."

The number of graduate students in engineering schools in the fall of 1959 is somewhat over 35,000, compared with a little less than 33,000 in the fall of 1958.

Geography Across the Curriculum

By N. V. SCARFE

Dean, College of Education
University of British Columbia, Vancouver, Canada

THE PURPOSE of this article is to show how modern geography, well taught, fits particularly well into the major theme of a complete education in the mid-20th century. To do this, it will be necessary to expound in some detail the special function and purpose of geography in school and to discuss modern education.

The function of modern education in school is to train future citizens to think diligently and critically for themselves and by themselves so that they can act wisely and virtuously in social, political, economic, and private affairs. This definition of education puts the emphasis on the thinking process rather than on the acquisition of uncomprehended information. The statement assumes that facts, information, data, and experiences are the raw materials on which future citizens must exercise their minds. As a result of diligent, careful, and critical thinking, many facts will be remembered because they are understood and associated, one with the other, into ideas, impressions, and attitudes. Educated citizens are essentially thoughtful citizens who are able to apply wisely knowledge and understanding acquired through the exercise of the grey matter.

The emphasis on thinking also implies a method of teaching and indicates that the child or the student must do the thinking for himself and by himself and must arrive at his own conclusions, generalizations, principles, and ideas. Educational method is, therefore, conceived as an active, creative, constructive research type of exercise which relies heavily on the application of acquired ideas and methods to the solution of future problems.

The following attributes seem obvious derivatives from the main statement. Future citizens should use their leisure time in constructive and creative ways. They must learn to vote wisely, read newspapers intelligently, and be careful to discriminate when choosing to listen to radio or view television and movie programs. They should acquire the habit of considering thoughtfully social and political problems. They should maintain wide interests in many aspects of living, both at home and abroad. Finally, they should behave in a responsible manner, both publicly and privately. The interesting fact is that all these attributes are just those specially fostered by geographical study.

A study of the world which does not associate facts of the environment with facts of human activity, and thereby promote good ideas on how the world's resources may be better used and human understanding the world over more appropriately fostered, cannot be called geography. Geography is designed to develop goodwill and international understanding. It is not designed to crowd the mind with a compendium of information about capes and bays, or capitals and products, or cities and factories of the world. No geography worthy of the name can get on without the essential details and facts of the world, but it never can become geographic *education* until a child thinks through these facts for himself by active experimental methods and arrives at ideas and impressions which will modify his future outlook and behavior for the good.

To see the relationship of geography to the rest of the subjects of a school curriculum, it is necessary to study the diagram on the front cover of SCHOOL AND SOCIETY, in which the totality of study in a school is represented by a circle. The intent is to show that all knowledge is a whole and that all aspects of knowledge are closely linked one with the other in various ways. The various segments into which this circle is divided are not to suggest that any subject is a slice of total knowledge, but rather that any subject is a way of looking at total knowledge.

No subject in the curriculum can be defined as a body of facts or content. Subjects in the curriculum are points of view, or themes or ways of relating neutral facts. Total knowledge is divided into various subjects in order that the various points of view may be more clearly seen and their relative emphasis assessed. Total knowledge is a mass of neutral facts or information, but to be understood the facts must be looked at expertly from particular points of view.

To begin with, there are two major topics that all school children must study: studies of man and studies of the physical world in which men live. The world in which men live is usually called the world of nature, and its study is called "natural science." Natural science relates the various facts of nature together. Put in another way, it is the study of the effect of one set of natural conditions on another set of natural

phenomena. As an example, we study how plants are related to the soil in which they grow.

We call the study of man "social science," and its purpose is to study the effect of men on men, or one type of human action or thought on another type of human action. The adoption of a Communist ideology by the Russians certainly has had grave effects on the human actions of many people in the rest of the world.

There is, of course, a third kind of association of facts. This is the study of he effect of natural phenomena on men's actions. The study of this type of relationship is essentially the study of geography. It is quite distinct from natural science, which should concern itself solely with the effects of the various phenomena of nature one on the other, and also from social science, which is concerned solely with the influence of one set of human action or thought on another type of human action and thought. Geography, therefore, is above all the great integrating core of the content side of any school curriculum.

Every subject in the curriculum is, for school purposes, a vehicle or medium through which children are educated. Each subject is a separate and different way of stimulating the thought processes. Each subject is a means by which ideas are achieved, attitudes formed, and character improved. A well-rounded character, a balanced thinking mind is one which has attempted to attack total knowledge from the various distinct points of view that school subjects provide. The essential unifying, educational process is the thought process which may be defined as a diligent, active, experimental search for the relationships between different sets of facts.

Since geography is concerned with the thoughtful discussion and investigation of the relationship between men and their environment all over the world at the present time, it obviously fits right into the middle of modern education. It lends itself to active, scientific inquiry of immediate and pressing world issues. Its emphasis on field work, the study of pictures and specimens, of maps and other exact data from the world makes its content of real value simply for its own sake. Its importance, however, is not in geography for its own sake, but in the light that the study of the space factor throws on the political and social problems of the world and the way in which it leads to national and international understanding and goodwill.

Geography does not teach conformity or uniformity. It tends towards the development of individual excellence and encourages people to think for themselves and to reserve judgement until relevant data are available. While it leads to international understanding and goodwill, this is in no sense a sloppy sentimentalism or soft-hearted piety. The understanding is based on the knowledge that people the world over must face problems which are not of their own making, but are presented to them by the forces of nature. In general, geography is able to show that human beings, in dealing with natural conditions, tend to adjust their lives in a sensible and often ingenious manner. This does not mean that men succumb to the problems that nature presents, but rather adjust in a constructive and creative way. Geography also is able to point out where men thoughtlessly abuse nature or recklessly exploit resources in a shortsighted fashion. In the main, however, geography presents man as a sensible human being, adapting the environment to his needs and wisely using the opportunities that nature provides.

Because men react to nature in so many different ways all over the globe, and because geography shows the great advantage of a world with variety, so geography develops individual excellence rather than social conformity. Social conformity is, of course, very different from social sympathy, which is the ultimate aim of geographers.

Geography is in no sense a memoriter subject or a gazeteer compendium of information. It is not taught very successfully from any one textbook and is certainly not adapted to a lecture method or a deductive procedure. Geography in school is, above all, an experimental, inductive inquiry into the influences that places have on people by an intensive study of detailed small samples of the great regions of the world. There are very few exact laws or principles in geography; and it is certainly not a predictive science. The only firm and fundamental rule that we can state is that in every social, political or economic problem in the world, there always is a geographic explanation as well as a historic or economic or political explanation. In all human affairs the influence of place conditions always is important. The way in which human beings adjust or react to those place conditions forms a very intricate and absorbing study. Geography is, thus, one of the great liberal arts.

From an analysis of modern education and modern geography, it is reasonable to conclude that the aims, purposes, objectives, and methods of geography fit more closely than any other subject into the central core, purpose, and methods of modern education, especially if taught in each grade throughout the school system as a pro-

gressive, developing sequence of increasingly difficult concepts, ideas, and generalizations.

Many may wonder why the theme which has been developed here has not been universally accepted. There are probably four main reasons for this. The first is that geographers have not emphasized sufficiently the purposes for which geography is taught in school. They have not stressed that it is a subject primarily concerned with relational thinking rather than with factual cramming. Another important reason relates to the methods by which geography has been taught. Lecture methods, slavish adherence to one text, verbalism, and erroneous and impossible deductive thinking have been used with a subject and an educational system entirely unsuited to such obsolete techniques. The advent of the vivid travel story, of filmstrip and film, of accurate detailed maps on large scales and the emphasis on field and laboratory study have made it possible for geography to fit in extremely well with the way in which modern education must be undertaken.

A third and very dangerous tendency in geography has been the over-emphasis of what might be called the systematic abstract kind of geography which tends to disintegrate the subject too soon into physical, human, political, economic, historical, and cartographical geography. These divisions of geography lead in school to a dangerous, abstract, overgeneralized verbalism. It removes geography from a detailed study of small samples where man's everyday adjustment to conditions can be studied in a way understandable to children. Systematic geography, by being too generalized too soon, disintegrates the subject at the school level.

For school purposes, regional geography, in which regions are studied as a whole in their complete interrelational synthesis, is important. However, no children can understand large regions or the complete synthesis to begin with. The detailed study of a major or minor region of the world which has a unique "personality" and distinctive differentiating characteristics is so much more realistic, so much more down-to-earth, than an abstract, generalized classification of the world. Children in school need the close contact with the reality of the ordinary life of ordinary people in specified and exactly described areas. They cannot think deductively very easily, nor do they understand broad generalizations without the adequate detailed evidence which supports them.

Finally, it has done irreparable harm to education to try to confuse the geographic with the historic or the scientific point of view in school. It has helped neither history nor science and certainly not geography. The fact that all knowledge is whole and very closely interrelated does not mean that several different ways of looking at total knowledge should be muddled together.

Isolated items of information or detached facts are quite neutral and do not belong to any subject in the curriculum as such. They belong to all subjects. There are no sets of facts which are peculiar to any one subject alone. It is only when facts are related in particular and expert ways for special purposes that they become subjects. Subjects, as we have mentioned already, are particular ways of looking at total knowledge. They are themes or lines of interest. They are, in fact, the only way to make knowledge continuously interesting and meaningful.

In the study of any social or political problem, the influence of human actions and thoughts in the past (history) is quite different and distinct from the influence of economic conditions in the present (economics) or the influence of government policies and religious taboos (sociology). Each one of these influences makes itself felt in distinct and separate ways and with different emphasis at different times and places. Similarly, the influence of place conditions (geography), like mountains or drought, is quite distinct in emphasis and incidence from the influence of human beings (history) or of free trade policies (economics) on present-day society. The influence exerted on Canadian life by the Laurentian Shield (geography) is certainly different from the influence exercised by such persons as MacKenzie King or John Diefenbaker (history), and the two types of influences must not be confused.

A history lesson purporting to deal with the exploration of Canadian Prairies would tend to deal, with the great men and the sequence of events that led to settlement in a particular chronological order across the prairies. The teacher would very likely use maps and describe the river journeys and progress across the flat grassy plain. It would seem, of course, as if the teacher were using geography, but when she uses a fact like flat prairies or river direction, she is simply using neutral facts, not geographical facts. The facts are in every sense historical, because they are being used to explain an historical sequence of events. Moreover, the ultimate aim of the lesson is to show how a sequence of events developed and how that succession of events affects us now. The particular events are the effects of human action and of human beings on each other and are the historian's expert way of relating information toward a particular purpose.

A geographer might equally well be teaching about the prairies and would use some of the chronological facts from the past about explorers. The purpose, however, in using these chronological facts—the word "historical" is not used, because the facts are simply neutral chronological items of information—is to show how places have affected the past and present distribution of human activity. The exact sequence of events in the past is of no particular importance to the geographer. Instead, the particular influence of flat prairie or river direction on present settlement and past settlement is of great significance. The lesson ends with emphasis on place conditions. The point of view and the purpose of the geographer are, therefore, quite different from those of the historian, and it is wrong to confuse those purposes or points of view, even though the historian and the geographer seem to be using, in part, similar sets of neutral facts to explain the present situation on the prairies.

It is because people have allowed themselves to be confused into assuming that sets of facts or parcels of knowledge constitute subjects that we have come into this confused state of education in our school system. Rather than develop clarity and precision of thought through specific points of view, we have tended to allow memorized accumulation of facts to substitute for the real process of learning, which is the thoughtful association of facts into ideas and enlightened attitudes.

Since geography alone deals directly with the effect of place conditions on modern world problems, it is an essential study for every citizen. Since it is a thought-provoking scientific investigation requiring the association of facts into ideas, principles, and conclusions, it is an excellent educational device for developing the mind. Since it develops national and international understanding and goodwill, as well as socially desirable attitudes, it is a splendid citizenship subject. Finally, since geography is very useful in solving practical problems of life and living, it has vocational as well as leisure-time value. It is, in fact, the obvious center of any core curriculum.

THE FUTURE OF PUBLIC EDUCATION

by Myron Lieberman

A Blunt and Constructive Statement on the Muddle in Our Schools

Myron Lieberman offers a forceful argument in favor of greater teacher control of public education in the United States. He criticizes as "naive" the educational reform that is mainly the work of government, school boards and the lay public. What is needed, he believes, is a coherent decision-making structure in public education, and less theorizing upon the broader issues of methodology and philosophy. He believes that the primitive employer-employee relationships between school systems and teachers must be altered, and that the shibboleth of "local control" only fosters incompetence. The book proposes not only a new decision-making structure but suggests changes in the tactics of bringing about educational change. An important feature of the book is its analysis and criticism of the theories of James B. Conant, H. G. Rickover, Paul Woodring and others prominent in the contemporary educational field. This book should be read by all educators who care about their professional future. $5.00

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Ignorance of Elementary Geography Among College Students and Student Teachers

By ROBERT W. EHRICH
Brooklyn College

DURING the spring of 1959, I taught two sections of a standard sociology-anthropology course, "Peoples of the United States." Students from eight different departments, one-third of them education majors, made up one section. Student teachers of various categories (early childhood, elementary education, and high school), all seniors and all but four in their final semester, formed the other.

The following informal test was given to get an impression of their background in geography prior to discussion of the problems of regionalism. On an outline map of the United States, with each state and all major rivers clearly indicated, each student was to identify the 48 states shown; the Great Lakes; the Hudson, Delaware, Ohio, Tennessee, Mississippi, Missouri, Red, Rio Grande, Colorado, and Columbia Rivers; and to locate the Sierras, Rockies, Ozarks, Appalachians, and Alleghenies, as well as San Francisco, San Diego, Chicago, St. Louis, Detroit, and Philadelphia. This is hardly obscure or recondite information. The time allowed was 30 minutes, and the maps were to be unsigned. Of 52 students, only 47 submitted papers, for five student teachers were apparently too embarrased to turn in even anonymous efforts.

Although my scoring was, if anything, overly generous, the *average* number of misses on the states alone was slightly over 19 for the general section and approximately 21½ for the student teachers, or 26 including the withheld papers. Five students could not locate New York State, either leaving it blank or placing it in Pennsylvania or elsewhere. One student from each section identified Long Island as Rhode Island, and a third labeled it Delaware. Nine student teachers could not find the Hudson River or misplaced it. Results were slightly better for the Eastern Seaboard and much better for the three Pacific Coast States than for other regions. Even so, New Hampshire and Vermont were often switched to Massachusetts or Connecticut. The Middle Atlantic States were a hotbed of confusion, and the omission of Georgia frequently led to a rather drastic reshuffling of the entire coast. Some uncertainty between adjacent states is, of course, reasonable; but when North and South Carolina appear in Kansas and Nebraska, the situation is definitely out of hand. Almost none of the students realized that mountain ranges are watersheds and that river systems, as shown on the map, automatically mark their locations. The recognition of rivers, except for the Rio Grande, was distinctly weak. The Columbia appeared along the Missouri, the upper Mississippi, and the Tennessee, and the Delaware along the Ohio.

What are we doing when we award B.A. and B.S. degrees to people who are almost completely ignorant of basic, simple, and fundamental information? Supposedly, a liberal arts education strengthens one in his capacity to function as an informed individual in a free society. It is difficult, however, to see how one can take an intelligent stand on the problems of New York State if he does not even know the location of the Hudson River, or properly evaluate such projects as that proposed for the Columbia River if he thinks that the Columbia is an eastern tributary of the Mississippi.[2] Moreover, colleagues report similar situations in other fields, such as history before 1000 A.D., simple English grammar, arithmetic, and the like.

What is even worse is the fact, here clearly demonstrated, that we are sending out uneducated teachers who are ignorant of elementary school level foundations of subjects they are even now being called upon to teach. It is all very well to complain about the inadequate preparation of students who come to college from the high schools, but the fact remains that the teachers whom we supposedly train and send out to teach these youngsters themselves lack the equipment to fill in the gaps about which we are complaining.

[1] Based on an open letter to the Committee for Long Term Curriculum Study, Brooklyn College, which was distributed widely among members of the faculty. Although the setting in this instance happens to be Brooklyn College, the situation described here is, from all accounts, apparently nationwide.

[2] Told bluntly that they must pass much the same test by the end of the term or fail the course, on their second map quiz the students could identify the 48 states and were considerably better at locating the mountains and rivers. True, the Rockies did appear north of the Ohio, but at least they were no longer in Maine. However, of 29 student teachers born in Brooklyn, educated in Brooklyn, and now teaching in Brooklyn schools, six misplaced New York City and two omitted it completely. Percentage of error: 27.6%.

We should take two types of action: a program for the present college population and for those who will be entering shortly, and a longer range program to reduce the flow of incompetently taught students who will be candidates for admission in the future.

During their first semester, all freshmen should be required to take a screening examination in simple geography. A student who did not pass would be retained, but with a "condition" in geography which he would have to raise by a satisfactory performance on a similar examination before a given time. He would receive an instruction sheet or syllabus, including a bibliography and suggestions for independent study. This would help him to realize that he can learn something without necessarily having to be taught. He should be thrown entirely on his own resources, for it is objectionable and impractical to add further formal courses to an already overloaded set of distribution requirements. Furthermore, the colleges and universities should not continue to water down the total content of what they can offer the student because of time lost in making up the deficiencies in his secondary school education.

Ever since the depression they seem to have yielded to the argument that the high schools could not justifiably spend their time in properly preparing the low percentage of their students who went on to college. When the figure was perhaps only 10% of the high-school population, this position had a certain degree of specious plausibility. As the content of the school curriculum was being materially eroded, college courses had to be thinned down accordingly, for the time taken to lay foundations could only be gained at the expense of college-level work.

With the greater number of students now going on into higher education, colleges and universities are in a very strong position, and it is time for them uncompromisingly to pass the responsibility for high-school education back to where it belongs. They should refuse to do the high schools' work for them. After a given date, they should add certain requirements for admission, preferably to be met by examination, to those already existing. As long as the background of students coming to college is weak, the product sent out will be weak, and from my limited observation of 12 years, it seems to have been spiralling viciously downward.

Since one of our objectives is to send out reasonably well-educated and informed citizens, we must make concerted efforts in this direction. Even more serious, however, is the fact that a very significant percentage of our student body is fed back into the teaching system. Obviously, the more poorly equipped the teachers, the poorer will be the caliber of the students they send on. Conversely, it should be possible to improve the quality of the students by improving the quality of the teachers we produce.

It is high time to reverse the spiral by educating our teachers instead of merely training them.

EDUCATION'S CENTENNIAL DILEMMA: *What Knowledge Is of Most Worth?*

By **RICHARD E. GROSS**
Stanford University

In 1859, the *Westminster Review* published Herbert Spencer's incisive essay, "What Knowledge Is of Most Worth?" This opened the century-long struggle between older ideas of education and Spencer's thesis that the true purpose of education must be "to prepare for complete living." In Britain it has taken nearly a century for Spencer's views to gain minimal impact; but within 50 years of the publication of his essay, conditions were ripe in the U.S. for such aims to begin to have considerable influence. Today, however, as the British Prime Minister promises to help build over 2,000 comprehensive-type high schools and as Mr. Khrushchev reverses trends in Soviet education by introducing practical work experience and vocational emphases into the secondary curriculum, here in the U.S. Spencer's question again has become a fundamental issue. A recent Phi Delta Kappa sampling of professional educators reveals 48% of the schoolmen polled oppose reduction of nonacademic schooling to permit greater emphasis on basic disciplines, but 41% favor the idea "with reservations" and 11% heartily approve of a renewed academic emphasis. The dilemma remains.

Spencer pushed the slow-swinging pendulum of educational theory to the left as he attacked sterile classicism and the hold of formalism upon secondary education. He sought an essentially

new type of general education in the schools that would be based in physical and health education, vocational education, education for parenthood, civic education, and education for leisure. Spencer believed that the heart of this educational program would be in what we now call the social studies.

It is easy to imagine how Spencer's theories evoked considerable opposition. A long-running argument ensued, but eventually in the U.S. we claimed to subscribe to the Seven Cardinal Principles of Education that, of course, closely reflect Spencer's points. The implications of many of the ideas of the social evolutionists ultimately became a part of the Progressive Education movement, but the high schools held aloof to a much greater extent than did the elementary. However, changes in the high-school program eventually reflected Spencer's views. With the sheer numbers of students and the increased percentage of teen-agers being retained, the secondary schools evolved curricula that provided specialized education, vocational education, and varied inner-tracks or majors while they also carried out the traditional college preparatory function. As the high school became an extended expression of the democratic principles that underlie the common public elementary school in the U.S., the ascendancy of Spencer's ideas seemed to come to near full fruition. This was reflected in the publication of volumes such as "Education for ALL American Youth" (1944) and "Adapting the Secondary-School Program to the Needs of Youth" (1953), and in the development of movements such as "Life Adjustment Education."

During the 1920's, the social studies grew in importance in school programs at both elementary and secondary levels. In fact, in many lower schools that formally had given practically no attention to this field, the social studies moved to the center of the curriculum. The development of health education, home-making, guidance, and other newer areas reinforced the practical, Spencerian influence. In 1916, an NEA committee recommended a major alteration in the high-school social studies program that ultimately brought the familiar offerings of grade IX civics, grade X world history, grade XI U.S. history, and grade XII problems of democracy. History remained the predominant social study, but opportunity was provided for the introduction of important learnings accruing from the increasing contributions of the other social sciences. This basic pattern, now of questionable timeliness, remains.

For several years before Sputnik there existed considerable ferment and undercurrents of discontent with school programs in the U.S., and much of this came from the educators themselves who recognized the dangers of static or outmoded curricular organization in their rapidly changing times. Sputnik, however, crystalized opinion and action on the part of many groups and led to the rapid reverse swing of the pendulum with which we are now faced. Councils of "basic education" and citizens-school committees flourish. The State of New York has abolished the term "social studies" in favor of the more ambiguous but more conservative "citizenship education." Everyone jumps on the intellectual bandwagon and we are especially concerned about the gifted, the future leaders, and the college preparatory program. Summer schools burgeon with scholars as well as laggards. We speak again of differentiated diplomas for students in our different "tracks." So-called "frill" and "cupcake" courses are taking a new beating. A new trivium—science, mathematics, and foreign languages—is being forwarded. Ways are being sought to reduce the time given to physical education. Vocational and practical arts courses have suffered such reduction in enrollment that those programs are threatened in many comprehensive high schools. Even compulsory education, particularly past the age of 16, is being questioned. The American secondary school faces a period of readjustment unparalleled in the past half-century.

In assessing the continuing dilemma, since the social studies have become central in high-school general education, let us review some of the related pre-Sputnik developments in that field. Community pressures and voids as well as legislative measures brought a changing program that reflected the times. Hygiene and safety education, family life education, vocational study, alcohol and narcotics education, driver education, and other quasi-social studies appeared in the social studies offerings in many schools. Found most often at grades IX and X, these topics have brought considerable alteration in the traditional politically oriented civics course and materially reduced the percentage of students enrolled in world history. As a result, government courses have appeared or reappeared at the grade XII level and there has been an unfortunate decline in the contemporary problems courses that generally have been popular with seniors.[1] Present tendencies threaten to reduce further the program of social education.

[1] These trends are documented in R. E. Gross and L. D. Zeleny, "Educating Citizens for Democracy: Curriculum and Instruction in Secondary Social Studies" (New York: Oxford University Press, 1958), chap. 5.

The curricular accretions that have affected the social studies came with the growing concern for the individual in our schools. It will be necessary to decide upon the place of guidance functions in high-school general education. But whether we have separate orientation classes and homerooms or not, teachers will attain but limited success in motivating for social education unless they greatly extend individualized instruction in their classes as well as the problem-centered approach to learning. This does not mean a curriculum centered upon life-adjustment topics or a stream of social living courses, but it does call upon each teacher to employ a guidance-centered attitude in working with youth. While it may prove difficult to draw clear lines between guidance and other subjects, educators need to consider thoughtfully the statement of a leader in the guidance movement who claims that "guidance is basically a compromise between what we actually teach in the schools and what we know full well we ought to teach!"[2]

Other curricular fields have experienced the relatively haphazard and piece-meal alteration that has characterized the growth of the social studies. There is serious need now for a careful rethinking, by all persons concerned, of the role of the high school. Then, following a thoughtful analysis of our fluid society and of our growing knowledge of children and youth and how they learn, we can possibly apportion educational responsibilities among other educational agencies as well as within the school and, in terms of our sharpened purposes, select timely content and make necessary modifications in school organization and instructional approaches.[3]

Study groups carrying on such planning may do well to refer to lists such as the two that follow. On the left are the 10 major problems faced by 6,000 representative American teenagers as they reported them to the National Mid-Century Committee for Children and Youth. On the right is a revealing parallel list of major social issues, most frequently banned as taboo topics in the school, as given by about 500 school superintendents in a national survey of the NEA Committee on Tenure and Academic Freedom.

Prime Youth Problem Areas	*Closed Curricular Areas*
1. Military Service	1. Religion
2. Quarreling parents	2. Sex
3. Sex	3. Local politics
4. Being understood by parents	4. Communism
5. Finding the right job	5. Socialism
6. Close peer relationships	6. Public ownership
7. Threat of war	7. National politics
8. Alcohol and narcotics	8. Race relations
9. Driving	9. Labor-management
10. Racial and religious discrimination	10. United Nations

Where in the school curricula do we honestly touch with any adequacy upon these dynamic issues? How important are such factors in reappraising the school program? Which of these should or can be a responsibility of the school? How can the school work with interested groups and community institutions toward ameliorating the indicated problems?

Students themselves seem to recognize the vital need for new opportunities in social education, and this is evidenced by a survey made during the past year at a large, suburban, comprehensive California high school. All 10th- and 11th-graders were given a list of 20 possible elective course offerings for the next school year. The top 10, in rank order of preferance, came out as follows:

1. Russian	6. Geology
2. Psychology	7. Spoken Chinese
3. Sociology	8. Anthropology
4. Paleontology	9. Astronomy
5. Modern Philosophy	10. Short Story Writing

Half of these subjects, two in strong second and third place, fall into the realm of the social studies; undoubtedly, the interest in Russian and Chinese reflects the concern over international relations, and astronomy, man's coming venture into the frontiers of space. Young people want an education that will help prepare them to understand and live successfully in the unknown tomorrows that now come so soon. Are the best answers to be found in the traditional liberal studies of yesteryear?

The coming reassessment of the secondary school needs to center particularly upon the general education function. Although the high schools now are holding approximately three-quarters of eligible youth and nearly one-third of the graduates soon will be knocking on college doors, the bulk of the high-school graduates are going into jobs where employers call for little or no specialized training from the school. What are the central, common experiences that all youth should now share in the secondary school?

There is real danger in allowing or pushing too many young people into turn-back-the-clock or European-type college preparatory programs. Instead, in light of the amazing, evolving world and the host of new knowledge about it, educators must hypothesize, design creative approaches, and plan for long-term evaluation. It would not be amiss to review the maligned but largely

[2] The writer has discussed the problem of the place of guidance in the social studies program in more detail in *California Journal of Secondary Education*, 34: 213-18, April, 1959.

[3] The writer reviewed a number of these new developments in the Jan., 1959, issue of *Social Education*.

overlooked Eight-Year Study of the Progressive Education Association.[4] One of America's most comprehensive educational experiments, unfortunately coming to a culmination in 1941, it illustrates some of the concepts that need to mark continuing research, as well as the large-scale and far-reaching direction that our research must take if we are to resolve our continuing dilemma.

In our challenging era, how can we maintain basic values and build the new knowledges and skills essential for general education? To what extent do the social and humanistic studies provide content and direction here? What should be the role of the high school as our country reaches the threshold of a wondrous age? How can we balance intellectual attainment and preparedness for complete living—goals every bit as important and yet ever more complex than they were 100 years ago? And, one wonders, where would Herbert Spencer stand today?

[4] See W. Aikin, "The Story of the Eight-Year Study" (New York: Harper, 1942).

Pedagogical Preparation of Teachers for Professional Schools of Dentistry

By ALFRED J. ASGIS
Editor, *New York Journal of Dentistry*

TWO ISSUES WERE RAISED at a meeting, held on June 9, 1959, under the auspices of the National Committee of University Dental Teachers. This committee is developing the program of the Dental Teacher's Club of 1937.

1. Mastery of subject matter is adequate for effective dental instruction, and the use of pedagogical methods is not essential for dental teaching.—Some dental educators believe that teaching in a professional school—a university dental school—calls only for knowledge of subject matter in the area of instruction. Graduate education for teaching effectiveness is unnecessary, since "teachers are born, not made."

The thesis here defended is that educational methodology applies to dental and medical teaching as well as to college teaching. For over 25 years, progressive leaders in dental education supported this view. In 1940, Lloyd E. Blauch, Assistant Commissioner for Higher Education, U.S. Office of Education, stressed the importance of using pedagogical tools as a means of efficient dental teaching:

> Another aspect of the teacher's equipment is an acquaintance with pedagogic method and considerable skill in its use. Teaching is not such a simple matter as pouring water from one vessel into another; far from it. Even with the most careful training, people find teaching an undertaking of no mean proportions, and some of them cannot do it at all. Many failures in teaching are due to the use of poor teaching methods.[1]

To convince some skeptics that effective dental instruction calls for proper use of teaching methods and instructional aids, it will be necessary for professional educators to come to the rescue of the dental teacher. Rumors have it that educators do not approve of this idea. A frank discussion would benefit professionalization of dental teaching.

2. One must not be professionally trained in education to qualify as a university dental-teacher.—The erroneous notion still prevails, especially among successful dentists, that "he who can, practices; and he who can't, teaches." This fallacious conception of dental teacher education was repudiated by some dental educators 25 years ago. In 1935, some dental deans favored pedagogically trained dental teachers. Such qualified dental faculties, in their opinion, would benefit the dental student, the dental school, and dental education.

In 1936, the College of Dentistry and the School of Education of New York University jointly inaugurated the first dental-teacher training program in the United States. The writer designed a curriculum for that pioneering project. He also prepared three textbooks on the history and principles of functional dental education and on the methods of dental teaching to meet the needs of the class of 42 dental teachers.[2] Although successful as a pioneering project, the climate was not conducive to its continuation under conditions that prevailed at the time. Opposition to the idea of requiring pedagogical preparation as a condition for dental faculty appointment was expressed publicly in editorial comment.

The aim of dental education today is to qualify practitioners for preventive services and oral-

[1] L. E. Blauch, *Journal of the American Dental Association*, 27:2, 224, Oct., 1940.

[2] A. J. Asgis, *Dental Items of Interest*, 58:5, 579-586, March, 1936.

health maintenance for the individual and the community. Dentistry is a medical-surgical discipline and phase of preventive medicine, and dental instruction is guided by that aim. The student of today—the family dentist of tomorrow—seeks an academic environment conducive to the cultivation of a scientific and ethical attitude. It has been said that "dentistry depends upon good teaching" and that "the education of quality depends upon teachers of quality."

Another vital issue appears to be emerging in the area of dental teacher education, *i.e.*, teaching and research. Some dental educators are of the opinion that a trained research worker in dentistry is automatically qualified for the task of teaching dentistry. Should this viewpoint encourage a possible trend, it is bound to frustrate the goal and objectives of teacher preparation for the professional school of dentistry.[3]

Some dental teachers have believed that teaching in any area of higher learning is a professional task for which pedagogical preparation is essential. They have felt a need for improving methods of dental teaching and providing information for prospective dental teachers. Accordingly, the National Committee of University Dental Teachers was organized in 1958 to improve and professionalize dental teaching; correlate outcomes of dental research and advances in dental practice with the needs of dental education; advance educational research in methods of teaching and learning with the co-operation of dental teachers; and stimulate participation by the dental profession in advancing dental education and gain recognition of dental-teacher status.

In his history of the first century of the National Education Association, Wesley records the following observation, which applies to the present ill-defined status of the teacher in the professional school of dentistry:

> In 1870 education was not a science, and teaching was not a profession except in the minds of those who chose to regard it as such. Educators saw the necessity of a profession of teaching and boldly proclaimed its advent nearly a hundred years before its actual arrival.[4]

[3] A. J. Asgis, *Journal of Higher Education*, 22:6, 325-329, June, 1941.

[4] E. W. Wesley, "NEA: The First Hundred Years" (New York: Harper, 1957).

Stereotypes About Aging and the Aged

By **FRANKLYN N. ARNHOFF**
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THE PAST DECADE has seen a phenomenal increase in interest in the aged and in the aging process, with a consequent rapid increase in scientific literature as well as in popular articles about aging. Educationally, however, little is known about the effects of this information on the opinions and attitudes held by the general population and by those who work with the older members of the population.

For the past few years, studies of the opinions and attitudes about aging and the aged have been made with different age, occupational, and socio-economic groups. Usually attitudes were appraised by questionnaires based upon statements regarding the older persons' physical and mental decline, personality change, learning, resistance to new ideas and methods, attitudes towards younger persons, and flexibility in thinking. Most of the statements are oriented towards disability, although some deal with positive, over-idealized aspects of old age. The factual basis for most of the statements is scant, but there is evidence for physical decline. Even for physical aspects, the evidence indicates that changes are gradual with wide variability among individuals over the life span; and, of course, some physical and sensory losses may be compensated by glasses and hearing aids, by modification of work tasks and work habits, and by changes in psychological orientation. Basically, however, the statements are stereotypes representing belief or opinion rather than facts.

In 1952,[1] using a questionnaire about older persons and older workers, Tuckman and Lorge found that experts working with the old in industry, medicine, social welfare, and education had predominantly negative attitudes.

In the summer of 1958, 36 fellows attended an inter-university institute for training faculty in the field of gerontology. Most had been working with aged persons, either in teaching or research, or as consultants on governors' advisory councils on aging. By background and activities, the fellows may be viewed as experts in aging and the aging process.

A questionnaire about aging was administered to this group in two forms: one asked for beliefs

[1] J. Tuckman and I. Lorge, *Science*, 115: 685-687, June 20, 1952.

about truth or falsity of each of 100 statements; the second asked, for the same 100 statements, whether the characteristic was desirable or undesirable. The rating of the statements for desirability is an innovation. Ratings for desirability will be valuable in estimating cultural and national differences in attitudes toward aging and the aged.[2]

Of the 36 fellows (from psychology, sociology, anthropology, psychiatry, economics, political science, and physical education), only 25 answered the two questionnaires. In this respect, they were self-selected. The median age was 41 years with a range of 30-52 years. All held the Ph.D. or M.D. degree.

Despite the experiences of the respondents, they tended to accept very many stereotypes about aging. While many items were considered false by all responding fellows, no item was accepted as true by the entire group. At least half believed in the truth of such statements as: old people worry about financial security, respect tradition, forget more things than they used to, become easily fatigued, worry about their health, are slow, like to think about the past, are set in their ways, believe in a life after death, become more interested in religion, are critical of the younger generation, are conservative, like to give advice, prefer old friends to making new ones, have many accidents resulting in injury in the home, worry about the future, tend to become more like other older people as they age, dislike any changes or interference with established ways of doing things, have poor co-ordination, expect obedience and respect from their children and grandchildren, like to gossip, are very lonely, have few friends, and are very proud.

Of the 24 statements that a majority of the fellows accepted as true, nine were considered to be undesirable, *e.g.*, statements about money (worry about financial security and the future), about health (worry about health, many accidents resulting in injury in the home), about established ways (set in their ways, worry about the future), about loneliness (are very lonely, have few friends), and about forgetfulness and becoming easily fatigued.

On the other hand, none or few of the 25 fellows believed that old people are better off in an old-age home, are unable to handle their own finances, think the world is heading for destruction, take jobs away from younger persons, have no ambition, think the future is hopeless, are helpless, have no interest in the opposite sex, are in their second childhood, are in the happiest period of their lives, and cannot manage their own affairs.

Of the 11 statements that a majority of the fellows rejected as false, all were considered undesirable by almost every one of the 25 fellows, with the exception of the statement that old people are in the happiest period of their lives.

Despite the increase in welfare legislation for the aged and the increase in professional, semiprofessional, and lay articles about the aged and the aging process, it is progressively more apparent from studies of this sort that the later years of life in our culture represent an emotionally charged and affect-laden period. Whether dissemination of factual information, in and of itself, can change the negative attitude is still moot, but the current cultural emphasis on speed, accuracy, and continued achievement tends to suggest why six of the fellows accepted the statement that the aged are a burden to society. When experts have negative attitudes toward the older years, it means that their activities will tend to be palliative rather than positive.

[2] Scholars in England, France, Norway, Sweden, Turkey, and Japan are arranging to have the questionnaires administered in their countries in authentic translations. In England the questionnaires, of course, will be given in the original versions.

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SPECIAL SECTION

DOCUMENTS FROM RED CHINA AND RUSSIA

Pages 72-77

The New Curricula of the General Education Schools of China*

By V. KLEPIKOV

Translated by Ina Schlesinger
White Plains, N. Y.

In March, 1957, at the third all-China conference of teachers and administrators held in Peking, the problem of the reorganization of the curricula of the elementary and secondary schools of the Chinese People's Republic was one of a series of questions under discussion; the question was examined from all sides with a view to lessening the load of the pupils and heightening the quality of the teaching. In the current school year, the schools of China already started working according to the new plan.

I. *Curriculum of the elementary schools.* In the Chinese People's Republic, the elementary school is still the most important unit in the system of national education. The newspaper, *Tsiaoshibao* (*Teacher's Newspaper*), reported October 1, 1957, that, in the 1957-58 school year, 65,960,000 pupils were enrolled in the elementary schools of the Chinese People's Republic, while only 5,680,000 were enrolled in the secondary schools. An absolute majority of the graduates of elementary schools start out on an independent life immediately, so that the tasks of these schools today are very great: they must provide the highest possible degree of knowledge and give the children a definite preparation for practical life. It is understandable that problems of the content of teaching, its quality, and the quality of the curriculum have acquired a particular importance.

Schooling in the elementary school is for a six-year period. The school year consists of 34 school weeks and is divided into two semesters.

The newspaper *Tsiaoshibao* (July 12, 1957) publishes the new curriculum for the elementary school. (The number of hours in the week are shown.)

This curriculum differs in many ways from the curriculum of the past years. The number of hours devoted to nature study is reduced (136 as against 170), and the number of hours devoted to singing is reduced also (204 as against 306). The number of hours devoted to the study of the Chinese language is increased (2,312 as against 2,244).

Moreover, a new subject is introduced in the second stage of the elementary school: "Basis of Agriculture." The study of this subject provides the pupils with the possibility of acquiring an elementary knowledge of agricultural production and of preparing themselves for practical activity. It is necessary to remember that 90% of the total number of elementary schools in the Chinese People's Republic (530,000) are located in rural areas and, consequently, that a large part of the graduates of the elementary schools go to work in agriculture. However, pupils in the city elementary schools of the second stage continue to take manual labor as a subject.

Finally, the new curriculum introduces one hour of the class leader for the whole six-year period of instruction. The aim of this measure is to improve the political and moral education of the pupils.

The relationship of the series of school disciplines and individual disciplines in the curriculum of the Chinese elementary schools is expressed in the following numbers: 46.7% of the whole amount of school time is devoted to the humanistic series. (Chinese language, history); 28.6% is devoted to the natural science-mathematics series (arithmetic, natural science, geography); 5.2% is devoted to the production-technical series (Basis of Agriculture, manual labor); 7.8% is devoted to physical education; 7.8% is devoted to esthetic education; 3.9% is devoted to the hour of the class leader.

The basis of instruction in the Chinese elementary school is formed by the subjects of

* From *Narodnoye Obrazovaniye*, No. 8, 1958, pp. 100-101.

Subjects	First Level				Second Level		Total
	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. Hours
1. Chinese Language	12	12	12	12	10	10	2,312
2. Arithmetic	6	6	6	6	6	6	1,224
3. Nature Study	—	—	—	—	2	2	136
4. Geography	—	—	—	—	2	2	136
5. History	—	—	—	—	2	2	136
6. Basic Agriculture	—	—	—	—	1	1	68
7. Manual Labor	1	1	1	1	—	—	204
8. Phys. Culture	2	2	2	2	2	2	408
9. Singing	1	1	1	1	1	1	204
10. Drawing	1	1	1	1	1	1	204
11. Hour of Class Leader	1	1	1	1	1	1	204
Weekly Load	24	24	24	24	28	28	5,236

Chinese language and arithmetic; 67.5% of the total study time is devoted to these subjects (44.1% to Chinese language, 23.4% to arithmetic).

The knowledge acquired in the elementary school permits continuation of study in the secondary school; the elementary school gives a definite preparation for entering upon a life of toil with the nation.

II. *Curriculum of the secondary schools.* The following new curriculum of the secondary schools in the Chinese People's Republic is taken from the journal, *Zhenmintoziaoyui (National Education).*

In this curriculum, the new subjects are politics and basic agriculture. The inclusion of a course of politics in the curriculum is dictated by the need for strengthening the ideological-political education of young people, which is particularly important in the period of transition to socialism which China is now going through.

In the lessons of politics, pupils acquire an elementary knowledge of the theory of socialist

Subjects	First Level				Second Level		Total
	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. Hours
1. Chinese Lang.	2	2	2	—	—	—	204
2. Literature	5	5	5	5	5	5	1,010
3. Arithmetic	6/5	—	—	—	—	—	187
4. Algebra	—	4	2	4/3	2	2	455
5. Geometry	—	2	3	2/3	2	2	389
6. Trigonometry	—	—	—	—	2	2	134
7. Hist. of China	3/2	3	—	—	3	3	385
8. World History	—	—	3	—	—	—	102
9. New & Newest World History	—	—	—	3	—	—	102
10. Politics	2	1	1	2	2	2	336
11. Phys. Geogr.	3/2	—	—	—	—	—	85
12. World Geogr.	—	2/3	—	—	—	—	85
13. Chinese Geogr.	—	—	3/2	—	—	—	85
14. Eco. Geogr. of China	—	—	—	—	2	—	68
15. Botany	3	2	—	—	—	—	170
16. Zoology	—	2/4	2	—	—	—	170
17. Human Anatomy & Physiology	—	—	—	2	—	—	68
18. Physics	—	3/2	2	3	3	4	485
19. Chemistry	—	—	2/3	2	2	3	317
20. Foreign Lang.	3	—	—	4	4	4	510
21. Phys. Culture	2	2	2	2	2	2	404
22. Music	1	1	1	—	—	—	102
23. Drawing	1	1	1	—	—	—	102
24. Basic Agriculture	—	—	2	—	—	—	68
Weekly Load	28/29	30	31	29	29	29	6,023

revolution and of the basis of Marxism-Leninism. They study the policy of the Communist Party of China and basic party documents. This course also includes part of the course of Constitution of the Chinese People's Republic, which was abolished as a separate subject in the current year.

Of the 6,715 secondary schools of the Chinese People's Republic, 74.5% (mainly secondary schools of the first stage) are also located in rural areas and small towns. The study of the second new subject—basic agriculture—in the secondary schools must give the young people sound knowledge and practical skills and prepare them for successful participation in productive activity after they finish the first stage of secondary school. In the secondary schools in the towns, pupils work on school lots for study and experimentation. They make excursions to industrial enterprises and study the basis of industrial production. In this way, Chinese general-education schools gradually begin the transition to polytechnic education. In conformity with the instruction of the Ministry of Education of the Chinese People's Republic concerning the realization of polytechnic education in the general-education schools of the country, a steadily growing number of schools give the pupils production training. For example, in the city of Peking, practical lessons on production techniques have been introduced in 58 schools. In a number of schools, practical lessons in metal and woodwork, in carpentry and in the work of a smith have been introduced, as well as lessons in machine shop and electrotechnics.

In the new curriculum, a number of disciplines which were taught before have been left out, as the Chinese comrades considered them to be of secondary importance. These are: hygiene, basic Darwinism, economic geography of foreign countries, technical drawing, and astronomy.

Explanations of the new curriculum for the secondary schools for the 1957-58 school year maintain that it is primarily necessary to ensure the best possible instruction in Chinese language, mathematics, politics, botany, zoology, and basic agriculture.

Up to very recently, Chinese language and literature were taught as one subject in the secondary schools of the Chinese People's Republic. Under the new curriculum, they are taught as two separate subjects.

The relation of the series of school disciplines according to the curriculum of the Chinese secondary schools for the 1957-58 school year is expressed in the following figures: 45.14% of the total school time is devoted to the humanities series (Chinese language, literature, history of China, world history, new and newest world history, politics, economic geography of China, and foreign language); 27.44% is devoted to the physics-mathematics series (arithmetic, algebra, geometry, trigonometry, physics); 16.22% to the natural-science-geography series (physical geography, world geography, geography of China, botany, zoology, anatomy and physiology of man, and chemistry); 1.12% to the production-technical series (basis of agriculture); 6.72% to physical culture; 3.36% to esthetic education (music, drawing); 20.16% of the total school time is devoted to Chinese language and literature together (3.36% to Chinese language, 16.8% to literature) and 19.44% to mathematics.

It is easy to see that the work load of a Chinese pupil in the majority of cases does not exceed 29 hours a week.

In the Chinese secondary general-education school, there is no branching out into various kinds of professional inclinations or professional courses. It is a general-education school. The curriculum is uniform for all schools of the country.

Rules for Pupils in Communist Chinese Elementary Schools*

By V. Z. KLEPIKOV

Translated by Ina Schlesinger
White Plains, N. Y.

In the Chinese general-education school there exist separate rules of behavior for pupils of the elementary school and for secondary school pupils. Rules of behavior for elementary school pupils (consisting of 20 paragraphs) were published by the Ministry of Education of the Chinese People's Republic on February 10, 1955.

The same principles underlying the rules for the behavior of pupils in the Chinese schools form the basis of the rules of the Soviet school. However, the rules of the Chinese school contain demands and paragraphs which do not exist

* From "Successes of the Chinese Elementary Schools," *Nachal'naya Shkola*, Oct., 1959, pp. 86-87.

in our "Rules for Pupils." Below we publish these rules.

Rules for the Behavior of Elementary School Pupils

1. Be a diligent pupil, be healthy, prepare lessons well, have good qualities and behave well, prepare for serving the Motherland and the people.

2. Honor the state flag and love the Motherland and the people's leaders.

3. Obey the orders of the director of the school and the teachers. Hold the good name of your school and your class dear.

4. Come to school and leave it punctually. Do not be late for lessons and do not leave lessons before the established time. Do not miss lessons without leave.

5. Bring all necessary textbooks and manuals to the lesson. Prepare everything necessary for studying before the beginning of the lesson.

6. Keep everything in order during the lesson, sit quietly and sit up straight. If you want to leave the classroom, ask the teacher for permission.

7. Study seriously during the lesson, listen attentively to the explanations of the teacher, as well as to the answers of your comrades; do not talk for no purpose, do not occupy yourself with extraneous matters.

8. If you wish to answer the teacher's question or ask the teacher a question, you must raise your hand. When the teacher gives permission, get up and answer; when he gives you permission to sit down, sit down.

9. Do your homework carefully and in time.

10. Fulfill conscientiously the responsibilities of a monitor. Participate actively in out-of-class activities.

11. Respect the director of the school and the teachers. Greet the teacher when he enters and leaves the classroom. Greet teachers and the director of the school also if you meet them outside the school.

12. Be friends with your classmates, love them, be in close contact with them and render each other mutual aid.

13. When you are on your way to lessons in school or when you are on your way home from school, do not loiter along the way. Avoid those places where some danger could arise.

14. Respect your parents, love your brothers and sisters. Help your parents in anything which you are able to do.

15. Respect old people and be polite to them. Yield the right of way or your place to old people, small children, ill or infirm persons, and give them all possible aid.

16. Be polite in getting along with people. Do not fight or abuse each other. Do not make noise or brawl in public places. Do not hinder other people from working, studying or resting.

17. Do not tell an untruth, do not deceive people. Do not play games of chance. Do not take other people's things for your own. Do not harm yourself or other people.

18. Love and care for public property. Do not spoil or soil tables, chairs, doors, windows, walls, floors, etc. . . .

19. Eat, rest and sleep at the proper time. Continuously go for walks, play games and do sports; harden your body.

20. Care for the cleanliness and hygiene of your body, your food, clothing, objects of daily use, your bed and your room. Support cleanliness and observe the rules of hygiene in public places.

It Depends on the State Planning Committee

(Open Letter to the Chairman of the State Planning Committee of the Russian Republic, V. N. Novikov)*

Translated by Ivan D. London

Brooklyn College

TRANSLATOR'S NOTE: The technical equipping of schools in the Soviet Union has long been a serious problem and one which the increasing polytechnicization of the schools has made more troublesome. The article below gives some indication of the dimensions of the problem and is not unique, but reflects an only too characteristic state of affairs. Many of the workshops referred to in the article were not built with the direct support of the government, central or local, but through individual and group initiative and the assistance of sponsoring industrial or agricultural enterprises. Similarly, the visible equipment in these workshops—in all stages of serviceability—are the result of scrounging around for whatever could be spared from these enterprises and elsewhere and of soliciting their active aid. These practices mitigate somewhat the bleak picture drawn in the open letter. Six persons signed this letter: two directors engaged in turning out physics equipment, a physics departmental head, a chairman of an education commission, a shop superintendent in a factory turning out educational apparatus, and the director of a secondary school in Moscow.

In connection with the imminent transformation of the Soviet system of popular education, it is necessary in every way possible to strengthen the material base of our schools, to equip the special schoolrooms with new apparatus, to widen the distribution of workshops, and to set them up better.

In the schools of the Russian Republic more than 7,000 metal workshops, nearly 17,000 wood

* *Uchitel'skaia Gazeta*, April 14, 1959, No. 44.

workshops, more than 16,000 combined workshops, and 539 sewing workshops have been established. The number of these will increase even more in the future. But it is necessary to state frankly that these workshops are badly equipped. In them you will find a lack of machines, instruments, and material suitable for working purposes. . . .

Take even instruments for working with metal and wood. In the past year only 38 per cent of the schools of the Russian Republic were equipped with them [in the non-Russian republics the percentage would be very much less—*translator's note*]. This year [1959], strange as it may seem, funds for these instruments were sharply reduced. The Ministry of Education had asked that there be apportioned to schools 8,000 screw-cutters, 1,000 horizontal milling machines, and 3,000 wood lathes. Instead of this, in all only 500 wood lathes of type TN-1 were scheduled for school needs. The pedagogical community cannot help but be disturbed by the fact that plans for expanding the manufacture of machine equipment for the schools are being frustrated . . . because the Main Supply and Marketing Administration has not provided [factories] with electromotors. A [certain] factory in Kirov could increase its output of wood lathes considerably, but for this 0.4 kilowatt motors are needed and the factory gets them only in limited quantity.

Calculations show that 50,000 sewing machines are needed this year in order to furnish the special schoolrooms for the domestic arts. In a special conference on the problem of improving the material base of schools, called in January of 1959 by your deputy, Comrade Chadaev, it was indicated that 27,500 sewing machines would be apportioned for this purpose. However, the Main Supply and Marketing Administration promises to apportion only 9,000. Meanwhile, the Ministry of Education has received in all only 1,000.

It is known that printed visual aids quickly become useless if they are not pasted on fabric. For this reason a great deal of the state money assigned to such visual aids is tossed to the winds. However, instead of the 600,000 meters of fabric asked for, in all only 155,000 meters have been apportioned to the Ministry of Education.

Frequently expensive projection equipment stands idle in a school because no one bothered himself about the issue of spare bulbs. Try, for example, to replace burned out bulbs in one new[ly manufactured type of] motion picture apparatus—you won't find them. In various conferences and in the press teachers often complain about the impossibility of conducting laboratory

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work in physics rooms because of insufficiency of materials necessary for this—textolites, plexiglass, aluminum, rosin, terminals, sockets, and so forth.

The educational-technical industry of the Ministry of Education of the Russian Republic could manufacture more apparatus and equipment [to date, it meets only one-third of school needs], but its development is held back by an insufficiency of up-to-date equipment. . . . Even now in a [certain] Leningrad factory very heavy press work is still being done by hand. . . . In [another] factory in Moscow many machines have been in use for more than 30 years and are "morally" and "physically" exhausted. They have to be replaced, but with what? . . .

It is time . . . to improve the inventory of the enterprises of the educational-technical industry with materials and component parts for the manufacture of apparatus and school equipment. At the present, stock is supplied without much thought, without taking into account industrial plans. . . . It is time also to consider how better to supply the school workshops with working material, in particular, plywood which you wouldn't find in the provinces if you looked with a lamp in the daytime.

In this letter we are not in a position to list all the painful questions connected with improving the material base of the school—questions which should be decided without delay. We hope that our communication will elicit the necessary response.

CONFERENCE REPORTS

Problems of Urban Higher Education

Representing, as it does, 82 complex institutions of varying size which collectively enroll a high proportion of the nation's collegians, the Association of Urban Universities devoted the major share of its 45th annual meeting, Nov. 1-2, in Buffalo, N. Y., to considering problems brought about by expanding enrollments. The 61 presidents, chancellors, and other administrative officers of the member institutions discussed such diverse topics as town and gown relationships, increasing costs of higher education, and the place and problem of religion.

On the academic side, the urban universities intend to continue experimentation in new teaching techniques so as to cope with soaring enrollments. Growing shortages in qualified teaching personnel will make such experimentation vitally necessary in many urban institutions, the delegates noted. As to facilities, a number of institutions hope to take advantage of Section 112 of the Housing Act of 1959 to acquire the necessary land for campus expansion through urban renewal. Recognizing that both academic and physical expansion will be very costly, the delegates realized that careful cost analysis studies were necessary to improve efficiency and to determine trends in educational expense. In this connection, the educators were agreed that, whereas efficiency is important, their prime task is to maintain high standards of instruction.

To finance the essential expansion, Pres. Frank H. Sparks, Council for Financial Aid to Education, outlined a plan for "More Gift Dollars for Urban Universities." He pointed out that the 82 member institutions were getting a fair share of the growing number of corporate contributions, but were lagging in amounts given by their alumni. Dr. Sparks urged the city universities to seek gift dollars from the hundreds of local companies which have not yet established aid-to-education programs. More particularly, he called for an intensification of effort to convince alumni of their obligation to repay their debt to their Alma Maters and thereby help to finance the education of the present college generation.

In a keynote address, Chancellor C. C. Furnas, University of Buffalo, cited four principal answers to his question, "Why an Urban University?": It is on the home ground where it serves thousands of students who might not otherwise be able to attend college because of economic circumstances; it is quickly responsive to regional needs and thus enriches the economic and cultural life of the community; it serves as a "pipeline to the outside," facilitating the free flow of ideas and communications and thus breaking down provincialism; and it is a source of regional pride which constitutes "the most vital stream in the lifeblood of our modern urban communities."

In its formal resolutions, the association approved the continuance and extension of the College Housing Loan Program and urged the Federal government to devise suitable means of

assisting colleges in acquiring land for campus expansion and to help finance the construction of academic facilities. In addition, the association called upon the U.S. Office of Education to obtain adequate compensation for participating colleges in administering the National Defense Student Loan Program.

NORMAN P. AUBURN
President
University of Akron (Ohio)

Reconstructing Scientific Education for All

"MAN MAY FIND his best destiny only as he understands something of the forces that control his personal destiny and as the society in which he functions is attuned to scientific knowledge" was the keynote sounded by Dr. Polykarp Kusch, Nobel Laureate and professor of physics, Columbia University. The occasion for his address was the Tenth Institute of the Thomas Alva Edison Foundation, held at New York University, Nov. 19-20, 1959. The conference theme was "Reconstructing Scientific Education for All."

The first symposium dealt with "Educating for Scientific Literacy" in the different subject-matter fields of science. Speakers stressed that scientific education should lead to knowledge encompassing an understanding of the whole with appreciation of the causes and connections within science rather than the acquisition of an assortment of facts about nature. In physics this would involve an understanding of conceptual models and their relationship to reality. In mathematics, with which most branches of science are intimately connected, a higher degree of literacy could be achieved by thinking of it as a method of reasoning instead of a matter of calculation. Chemistry and biology courses, built upon their intellectual and conceptional relationships, are forward steps in producing understandings that will be satisfyingly useful in later years to non-science majors.

A reconstructed scientific educational system designed to help all students over the long road to scientific literacy would require liberal and synoptic courses. According to Dr. Benson Ginsburg of the University of Chicago, "these courses will have to achieve literacy for the taker at the level of concept, vocabulary and phenomenon to open the door to continuing self-education. Adequate information and vocabulary should be provided to help the student orient himself when formal education has been terminated. The techniques and prerequisites for advanced professional work would not be the same for the cultural major in science and those specializing in the field. In the past, the science course for the general student has been philosophized, historicized, socialized and humanized to make it palatable."

The psychological aspects of motivating all students for intellectual pursuits, including science, were then discussed. Panelists showed how effective presentation of science material could increase understanding and retention. There was no suggestion that scientific knowledge and understanding are easy to acquire. Such a "cult of easiness" impairs respect for the magnificent structure of a science and does not properly convey that our understanding of nature has been obtained by arduous toil.

The final session of the conference gave the 250 leaders from science, industry, and education an opportunity to debate the idea of national curriculums and examinations in science. Most of them were against this type of standardization.

FRANCES L. BEHNKE
Thomas Alva Edison Foundation
New York City

RECENT PUBLICATIONS

(Continued from page 71)

LAMONT, CORLISS (editor), *Dialogue on George Santayana*, pp. 115, $2.50; LAMONT, CORLISS (editor), *Dialogue on John Dewey*, pp. 155, $2.50. Horizon Press, New York 36.

LANDY, DAVID, *Tropical Childhood: Cultural Transmission and Learning in a Rural Puerto Rican Village*. Pp. 291. University of North Carolina Press, Chapel Hill. $6.00.

McCLUSKEY, NEIL G., S.J. *Catholic Viewpoint on Education*. Pp. 192. Hanover House, Garden City, N. Y. $3.50.

MEDLIN, WILLIAM K. *Soviet Commitment to Education: Report of the First Official U.S. Education Mission to the U.S.S.R.* Pp. 135. U.S. Government Printing Office, Washington 25, D. C. 70 cents (paper).

PIKE, FREDERICK B. *Freedom and Reform in Latin America*. Pp. 308. University of Notre Dame Press, Notre Dame, Ind. $6.00.

REID, ROBERT H. *American Degree Mills: A Study of Existing and Potential Ways to Control Them*. Pp. 100. American Council on Education, Washington 6, D. C. $1.00 (paper).

RUNES, DAGOBERT D., *Pictorial History of Philosophy*, pp. 406, $15.00; WINN, RALPH B. (editor), *John Dewey: Dictionary of Education*, pp. 150, $3.75. Philosophical Library, New York 16.

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